

ABSTRACT OF THE DISCLOSURE

A fuel delivery system for a gas turbine engine includes a main fuel pump supplying fuel to a fuel-metering device. The operational flow range of the fuel system is dependent on a minimum net positive suction pressure at the main pump inlet required to prevent pump cavitation. A mixture of fuel and dissolved gases increases the minimum net positive suction pressure required to prevent cavitation. A fuel de-aerator including a permeable membrane removes dissolved gases from the fuel to eliminate formation of dissolved gases. The elimination of dissolved gases from within the liquid fuel reduces the required net positive suction pressure, enabling a greater operational flow range.